MECHATRONICS ENGINEERING MAJOR

Plan of Study

A typical, full-time, four-year plan of study appears below. Some variation may be possible. Students should always discuss their individual plan of study with their advisor prior to registering for courses.

Course	Title	Credits
First Year		
Fall		
ENGR 1031	Fundamentals of Engineering	3
MATH 1141	Calculus I for Chemistry, Engineering, and Physics Majors	4
PHYS 1171 & 1171L	General Physics I and General Physics I Lab	4
CPSC 1101	Introduction to Computing	3
Modern/Classical Language Orientation Level [1]		3
First Year Experience (FYE)		0
	Credits	**17**
Spring		
CPSC 1131	Fundamentals of Programming	3
ENGR 2130	Engineering Graphics I	3
ENGL 1001	Introduction to Rhetoric and Composition	3
MATH 1142	Calculus II for Chemistry, Engineering, and Physics Majors	4
PHYS 1172 & 1172L	General Physics II and General Physics II Lab	4
	Credits	**17**
Second Year		
Fall		
PHIL 1101	Introduction to Philosophy	3
MATH 2243	Calculus III for Chemistry, Engineering, and Physics Majors	4
ELEG 2213	Introduction to Electric Circuits	3
ELEG 2213L	Electric Circuits Lab	1
MEEG 2201	Engineering Statics	3
MEEG 2201 Religious Studies Orientation Level		3
Ignatian Seminar I-Laudato Si'		0
	Credits	**17**
Spring		
ENGR 2145	Mathematical Analysis	3
ENGR 2145P	Mathematical Analysis PLG	0
MATH 2251	Ordinary Differential Equations	3
CPEG 2245	Digital Design I	3
CPEG 2245L	Digital Design I Lab	1
MEEG 3308	Strength of Materials	3
History Orientation Level [2]		3
	Credits	**16**
Third Year		
Fall		
ELEG 3348	Embedded Microcontrollers	3
ELEG 3348L	Embedded Microcontrollers Lab	1
ENGR 3260	Robots	3
Visual and Performing Arts Exploration Tier [3]		3
MATH 2217	Statistics I	3
ELEG 3231	Introduction to Electronics Circuits and Devices	3
ELEG 3231L	Electronics Circuits Lab	1
Ignatian Seminar II - Reflection		0
	Credits	**17**
Spring		
MATH 2211	Applied Matrix Theory	3
Behavioral and Social Sciences Exploration Tier [4]		3
MEEG 2203	Kinematics and Dynamics	3
CPSC 4350	Introduction to Data Science	3
ENGR 4301	Feedback Control Systems	3
ELEG 4355	Sensor Design and Applications	3
	Credits	**18**
Fourth Year		
Fall		
ENGR 4961	Senior Design Project I	3
ENGR 4303	Industrial Automation	3
ENGR 4305	Design of Mechatronics Systems	3
ELEG 4365	Internet of Things	3
History or Philosophy or Religious Studies Exploration Tier [5]		3
Major Elective [6]		3
Ignatian Seminar III-Social Action		0
	Credits	**18**
Spring		
ENGR 4962	Senior Design Project II	3
Science (or Math) Elective		3
Behavioral and Social Sciences Exploration Tier [4]		3
History or Philosophy or Religious Studies Exploration Tier [5]		3
Literature Exploration Tier		3
	Credits	**15**
	Total Credits	**135**

1. Choose any language offered by the Department of Modern Languages and Literatures, based on placement exam.
2. Choose any appropriate History or Religious Studies course at the 1000 level.
3. Visual and Performing Art History courses may be chosen from Art History, Music, Film, Television, and Media Arts, Studio Art, or Theatre.
4. Core Social Science course may be fulfilled by appropriate courses in Communication, Economics, Psychology, Politics, or Sociology and Anthropology.
5. Choose any appropriate Religious Studies, History, or Philosophy core course.
6. Major elective should be chosen with approval of advisor from among courses offered by the School of Engineering and Computing.